Chapter 3. Traditional Markets

I. Chapter Overview

For purposes of this report, staff divided the telecommunications marketplace among traditional, wireless and advanced services telecommunications markets. This chapter focuses on traditional markets. Staff provides an overview of the competitors, services, and customers in traditional markets as well as a detailed analysis of competition in terms of quantity of customers, lines, revenues, numbering resources and minutes of use.

II. Defining Traditional Markets

Traditional markets are the wireline markets that consist of local, local toll and long distance services provided by ILECs, CLECs and IXCs to residential and business consumers in California. The following discussion describes each of these areas in greater detail.

A. Competitors

Several categories of telecommunications carriers provide telecommunications services throughout California. These carriers are generally placed into three groups: (1) ILECs; (2) CLECs; and (3) IXCs.

ILECs – ILECs are the traditional wireline telecommunications carriers within defined geographic areas. Prior to 1996, for local service (and prior to 1995 for local toll service), ILECs operated as monopolies having the exclusive right and responsibility for providing local and local toll telephone service in defined geographic areas.[1] Currently, two large ILECs (Pacific and Verizon,) two mid-sized ILECs (Citizens and Roseville,) and eighteen small ILECs[2] operate in California. Also, some ILECs have affiliates who offer long distance, wireless and/or high speed data services.

CLECs – CLECs are wireline carriers that are authorized under state and federal rules to compete with ILECs to provide local telephone service. They often package their local

[1] The TA '96 allows the FCC to deem other carriers as incumbents if they occupy a position in the market that is comparable to an ILEC, have substantially replaced the ILEC in the market, or if such treatment is in the public interest. To date, the FCC has not deemed any carriers as comparable to ILECs in California.
[2] See Chapter 2, footnote 7 for a list of small ILECs in California

service offerings with local toll, long distance, international, Internet access, cable and/or video services. Under policies adopted by the CPUC, the FCC and TA '96, CLECs are not required to duplicate ILEC local service offerings. They can choose which customers to serve (business, residential or both), and what services to offer. CLECs provide telephone services in one of three ways or a combination thereof: a) by building or rebuilding telecommunications facilities[3], b) through the purchase of telecommunications services from another carrier (typically an ILEC) at wholesale rates and, then, reselling those services to their own customers at retail rates[4], and c) by leasing parts of the ILEC network referred to as "unbundled network elements" (UNEs).

Some larger CLECs operating in California are AT&T, WorldCom, Inc. (Worldcom), Pac-West Telecommunications Inc., and Cox California Telecom, LLC. Some ILECs have also been given authority to become CLECs outside their original service territories. In California, Pacific and Verizon each have authority to operate as CLECs in each other's service areas.[5]

IXCs – IXCs are typically defined as wireline "long distance" carriers. IXCs may provide long distance services to customers using their own facilities or by reselling to their customers the long distance services they have purchased from another carrier. Some IXCs also offer local and local toll telecommunications services in addition to international, Internet access, cable and/or video services. Other IXCs are affiliates of ILECs. Some IXCs operating in California are AT&T, Sprint Communications LLP (Sprint), WorldCom, Roseville Long Distance, Sierra Telephone Long Distance, and Working Assets.

B. Service Types

For ILECs, CLECs and IXCs, there are three broad categories of wireline service offered: 1) local service, 2) local toll service, and 3) long distance service. Local service typically includes a guaranteed set of functions quaintly termed "plain old telephone service" (POTS). These functions are usually provided for a standard monthly charge which covers the provision of dial tone on the customer telephone line, the ability to place and receive voice and data calls over basic telephone lines[6], as well as the cost of local calls within a limited,

[3] These "facilities-based" CLECS build the network they need to serve customers including the portion of the network (i.e. the local loop) that connects to the customer's premise.
[4] At one time, the use of "resale" by CLECs was thought of as a transitional market entry strategy while the CLECs were building their networks over a period of time.
[5] Presently, Verizon is not providing service as a CLEC in California even though it is authorized to do so.
[6] High-speed data services such as DSL are included as part the advanced services analysis in Chapter 4.

geographic area. For some carriers, local service may also include such features as directory assistance, operator services, access to 911 as well as discretionary services such as call waiting, caller ID, call forwarding and dial-up Internet access. For the purposes of this report, local service includes both POTS and the additional features described above.

The current regulatory framework governing local toll and long distance services is the result of the divestiture of AT&T in 1984, prompted by a settlement between the United States Department of Justice and AT&T over antitrust allegations. As noted in Chapter 2, geographical areas called LATAs were created throughout the United States as a result of the approved AT&T settlement and LATA boundaries define how and where telecommunications carriers are allowed to provide service. Initially, ILECs were allowed to provide telecommunications services within the LATA. Thus, ILECs provided both local service as well as local toll service, i.e. calls made to destinations within the LATA but outside of the "free" local calling area. In 1994, the CPUC authorized competition for local toll services in California with the issuance of D.94-09-065 allowing other carriers to enter that market along with the ILECs.

As a result of the AT&T divestiture, IXCs were allowed to provide telecommunications services between LATAs, i.e. long distance service. Competitors such as WorldCom and Sprint began to offer long distance service in competition with AT&T in the 1970's and now more than 700 companies offer long distance service nationwide[7]. Certain RBOC affiliated ILECs were initially prohibited from providing long distance services[8]. As discussed in Chapter 5, however, TA '96 makes provision for these RBOC affiliated ILECs, including Pacific, to now enter the long distance market with regulatory approval.

As the telecommunications marketplace evolves, however, the delineation between local, local toll, and long distance services is not so distinct. For example, some carriers have packaged local toll and long distance services together. Some carrier calling plans offer a flat per-minute-of-use charge for both local toll and long distance calls[9]. Other plans offer a flat monthly rate for local toll and long distance service that covers a maximum number of

[7] *Statistics of the Long Distance Telecommunications Industry*, p. 1, Industry Analysis Division, Common Carrier Bureau, Federal Communicaitons Commission, dated January 2001.
[8] The RBOCs, including Pacific Bell, were prohibited from offering long distance services since they took over the former local service territory of AT&T. However, other ILECs were not under the same restriction as the RBOCs. Some IXCs operating in California that are affiliated with non-RBOC ILECs are Cal-Ore Long Distance, Century Tel Long Distance, Inc., Citizens Telecommunications Company, Kerman Tel Long Distance, Pinnacles Long Distance, Ponderosa Long Distance, Roseville Long Distance, Sierra Telephone Long Distance, and Siskyou Long Distance.
[9] *Long Distance Rates Survey 2001*, Consumer Action News

minutes of use[10]. In some cases, therefore, the focus is switching away from the geographic delineations of LATAs and switching toward a minutes of use pricing basis.

C. Customer Classes

Clearly defined customer classes have been used as a method of segmenting markets. Residential and business services are regulated and marketed differently. In California, residential and business customers pay different rates for local service. There are also distinct policies and residential consumer protections in place that do not apply to business customers. For instance, subsidy programs such as Universal Lifeline Telephone Service assure residential customers access to basic telecommunications service; but the program is not available to business customers. As the telecommunications marketplace opened to competition, new competitors focused on specific customer classes. Many competitors do not provide the same range of services as ILECs.

II. Analysis of Competition in Traditional Markets

A. Analysis Summary

In examining competition in traditional markets, staff analyzed telephone line, customer, numbering, minutes of use, and revenue data. Staff found the status of competition varies among each of California's local, local toll and long distance markets.

In the local market, ILECs continue to dominate in customer share, numbering resources and revenues. Since the opening of the local market to competition in 1996, ILECs have served the vast majority of California's local telephone lines, as shown by data collected by the CPUC and FCC. In 2000, for example, ILECs in California provided service to between 94.0 and 96.4 percent of the state's nearly 25 million lines leaving CLECs only with between 3.6 and 6.0 percent.[11] CLEC market entry as measured by lines is also slower in California than in the U.S. Likewise, ILECs are dominant in the local market with respect to numbering resources. ILECs held 89 percent of the wireline telephone numbers at the end of 2000 while CLECs held 11 percent. CLECs have made even smaller inroads in the service territories of the small ILECs in the state, with only 2 percent of the wireline telephone numbers in those areas. Similarly, ILECs earned the lion's share of the local

[10] Id.

revenues between 1996 and 2000, with a five-year total of $23.4 billion. In contrast, the combined CLEC total revenues in the local market were only $190.1 million (less than 1 percent of ILEC total revenues) over the same time period.

Despite ILECs overall dominance, CLECs have a larger relative share of the state's local business customers than of its residential customers. Specifically, CPUC data shows that they served 5.6 percent of the state's 9.5 million business lines as of June 2001, as compared to 2.2 percent of the state's 14.8 million residential lines for that period.[12] CLEC local revenue gains have also been more consistent in the business market segment as compared to the residential market segment for local services. CLEC local business revenues grew steadily from .001 % of the state's local business revenues in 1996 to over 1.8% of those revenues in 2000. CLEC share of local residential revenues fluctuated during the same period, constituting just over .8% of the state's total local revenues from residential customers by 2000.

While ILECs are also dominant in the local toll market, their competitors appear to be faring somewhat better as compared to the local market. Between 1996 and 2000, CLECs/IXCs total local toll revenues were approximately $1.4 billion, or 20 percent of the ILECs local toll revenues of $6.7 billion. In 2000 ILECs retained 76 percent of total local toll revenues, which meant that CLEC/ IXC revenues were 31 percent of ILEC local toll revenues. CLECs/IXCs local toll revenues also grew faster than that of ILECs from 1996 to 2000 (CLECs/IXCs 93 percent compared to ILECs 4 percent growth). In addition, CLEC/IXC customer share grew from 19.3 percent to 24.3 percent of the total residential local toll subscribers in California in the period between 1999 and June 2001.

California's long distance market is providing mixed signals. Minutes of use data shows gradual growth while revenue data shows decline. Three separate indicators show that long distance minutes of use, while growing overall, either dipped or went flat at times between 1996 and 2000. Additionally, total long distance revenues in the state peaked at $1.2 billion in 1997 and steadily declined to $871 million by the end of 2000. Moreover, long distance subscribership reported by sampled carriers declined from over 10.6 million in 1996 to just over 8.8 million by mid-year 2001. The change in subscribership may be indicative however

[11] The range of numbers reflects differences in the data collected by the CPUC and the FCC.
[12] While the FCC groups residential and business lines somewhat differently from the CPUC, FCC data supports greater inroads for CLECs in terms of business versus residential lines. See discussion later in this chapter for analysis of that data.

of shifting customers between competitors and not actual market decline. The CPUC will continue to evaluate this market and report further to the Legislature.

In terms of long distance market share, AT&T's share of minutes, revenues and access lines has dropped substantially over the past six years. Worldcom and other competitors have gained share, while Sprint's position has not changed much. However, AT&T still holds over 50 percent of the market by the measures of revenue and access lines.

Examining aggregate revenue data across local, local toll and long distance markets corroborates the dominance of ILECs. ILECs earned about 46 percent of the $77.6 billion total retail revenues earned in California's telecommunications marketplace while the CLECs and IXCs combined earned 21 percent[13]. Similarly, ILECs reported four times the operating revenues that CLECs and IXCs reported. While they had similar growth rates during the period, ILECs reported $41.7 billion in total operating revenues between 1996 and 2000 and CLECs and IXCs reported $10.7 billion.

The remainder of this chapter provides further details about the status of ILEC and non-ILEC competitors in the various California markets. Chapter 5 of this report discusses CLEC market entry and exit in the state. There appears to be a relationship between the continued market share dominance of ILECs detailed in this chapter and reductions in competitor market presence and service offerings described in Chapter 5.

B. Local Services: ILECs Dominant

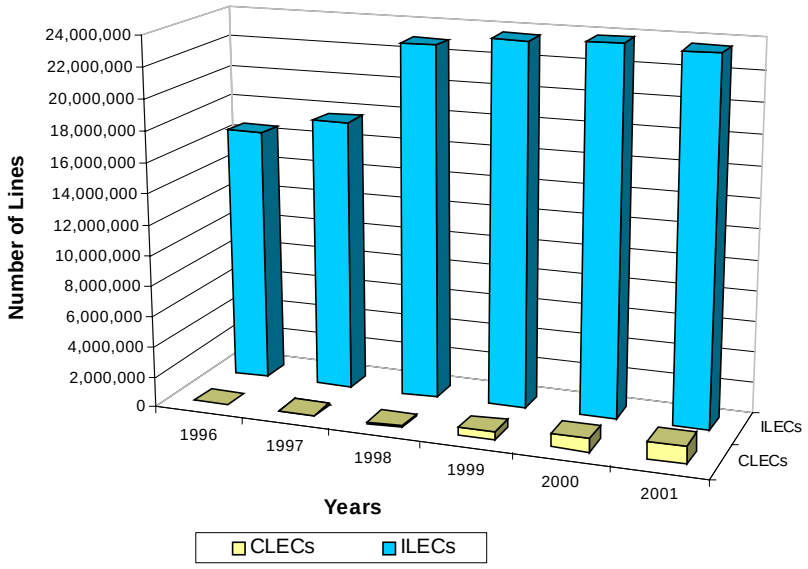
i. Customer Share: ILECs Control Between 94.0 and 96.4%

Analysis of the number of lines per carrier is one measure of the scale of competition in California. A discussion of ILEC and CLEC share of local telephone lines follows.

Overall Trend – In terms of customer share, the ILECs still hold the dominant position in the local telephone market in California. Figure 3.1 illustrates that ILEC dominance in local customer share spans back to when competition opened in this market. In 1996, ILECs in California served nearly 100 percent of the reported local telephone lines statewide with CLECs serving less than .1 percent of the lines in the state. By December 2000, ILECs served 96.4 percent of the nearly 25 million local telephone lines in California while the

CLECs served just 3.6 percent. ILEC and CLEC shares by June 2001 were fairly consistent with the December 2000 levels. (See Appendix A for detailed data breakdown).

Figure 3.1
Total California Local Telephone Lines, 1996-2001*



* Data through June 30, 2001
Source: CPUC Data Request responses

FCC data for California and the nation corroborates the ILEC customer share dominance. The FCC data indicates that as of December 31, 2000, ILECs in California held 94.0 percent of the nearly 25 million lines in the state and CLECs held 6.0 percent of them (see Table 3.2 below)[14]. In addition, the FCC data demonstrates that CLEC market entry is slightly slower in California than it is for the rest of the nation. CLEC local lines increased over 77 percent from 839,696 to 1,492,585 lines between December 1999 and December 2000. By contrast, CLEC local lines grew by about 97 percent for the nation as a whole.

[13] Wireless carriers collected the remaining 33 percent of the retail revenues.
[14] While there is a slight disparity between the FCC's and CPUC's data, it is likely due to different data collection techniques. Although there is some overlap, the pool of carriers sampled by the CPUC and the FCC does not match exactly. See Appendix G for a list of carriers sampled by each entity.

Table 3.2: Total Local Telephone Lines Reported for the U.S. and California, Based on FCC Data as of December 31, 2000[15]					
	ILEC Lines	***CLEC Lines***	***Total Lines***	***ILEC Share***	***CLEC Share***
California					
December 1999	23,168,260	839,696	24,007,956	96.5%	3.5%
December 2000	23,467,042	1,492,585	24,959,627	94.0%	6.0%
% Growth	1.2%	77.8%	4.0%	-	-
Nationwide					
December 1999	181,307,695	8,318,244	189,625,939	95.6%	4.4%
December 2000	177,420,655	16,397,393	193,818,048	91.5%	8.5%
% Growth	-2.1%	97.1%	2.2%	-	-

Residential and Business Customer Comparison – As measured by lines, the CPUC's data suggests a slower CLEC entry into the residential market than in California's business market[16]. Although CPUC data shows that CLEC residential lines only constituted 1 percent of total lines in California in 2000 and CLEC business lines only constituted 1.6 percent of the total lines[17], closer examination of the data reveals differences between CLEC residential and business growth rates.

CLEC growth amongst business lines in California is evident. Total business lines in the state grew from nearly 6.2 million in 1996 to over 9.5 million as of June 2001. As shown on Figure 3.3, the reporting CLECs indicated that they had less than 1 percent of the state's business local telephone lines through 1998. The CLEC share of those business lines grew to 5.6 percent by June 2001.

By comparison, examination of the residential lines in the state reveals slower growth for CLECs. Residential lines statewide grew from nearly 10.2 million in 1996 to about 14.8 million as of June 30, 2001. Figure 3.3 also shows that the CLECs sampled served no residential local telephone lines in California between 1996 and 1998 and served just 2.2 percent of them by June 2001. (See Appendix A for further details.)

[15] Source: FCC Form 477 data for the periods ending December 31, 1999 and December 31, 2000. See also Appendix A.
[16] While the ILECs serve most of the lines both in California and nationally, this part of the analysis is focused on the share of local residential and business lines held by CLECs. For ILEC residential and business line data, see Appendix A.
[17] CLEC "other" lines constituted 1 percent of the total lines in the state. See Appendix A.

Figure 3.3
Comparison of CLEC Residential and Business Line Share in California
1996- 2001*

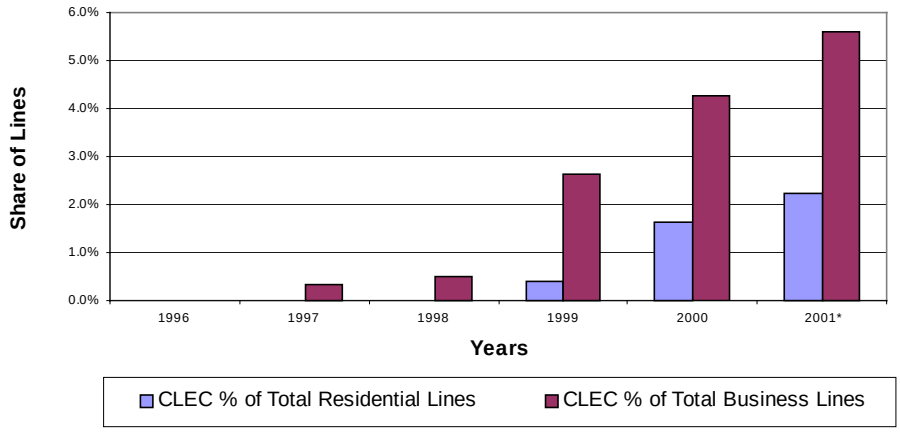
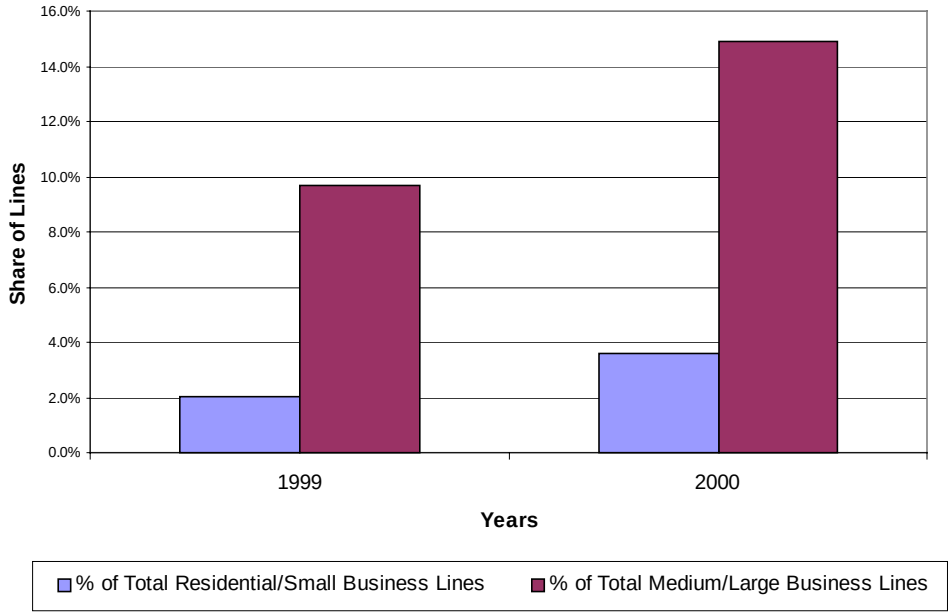


*Figure contains data for the first 6 months of 2001 only.
Source: CPUC Data Request responses.

FCC data further demonstrates that CLEC inroads into the local market for business service are greater than the inroads in that market for residential service (see Figure 3.4). Concentrating just on the local telephone lines for medium and large business customers, the CLEC share of those lines increased from 9.7 percent to 14.9 percent between December 1999 and December 2000[18]. During the same time period, the CLEC share of the total local telephone lines for residential and small business customers in California was smaller, growing from 2 percent to just 3.6 percent[19]. Differences between FCC and CPUC data may be due to the fact that the FCC groups small business and residential lines together and the CPUC does not. (See Appendix A for a detailed breakdown of the FCC data for both CLECs and ILECs).

[18] FCC Form 477 data for the periods ending December 31, 1999 and December 31, 2000.
[19] Id.

Figure 3.4
Comparison of CLEC Line Share in California, Based on FCC Data
1999 - 2000



ii. Number Utilization: ILECs Have 89% of Assigned Numbers

Overall Trend – Numbering data is another way to evaluate customer share because both CLECs and ILECs depend upon a supply of telephone numbers to provide local exchange service to customers in the California marketplace[20]. Carriers need telephone numbers in order to provide service to their customers. However, only a portion of each carrier's total telephone number inventory is working and assigned to customers. Thus, shares of *assigned* telephone numbers, and not overall number inventories, provide more meaningful information about competition.

The numbering data corroborates the subscribership data discussed in the previous section, showing that CLECs have made relatively small inroads into California's local market. As detailed in Table 3.5, ILECs have approximately 89 percent of the 40 million assigned wireline numbers in California. By contrast, CLECs have about 11 percent of those numbers.

Table 3.5: Total Wireline Telephone Numbers Assigned in California As of December 2000		
Carriers Types	**Telephone Numbers**	**Percent Assigned**
ILECs	35, 783, 794	89%
CLECs*	4,587,434	11%
TOTAL	40, 371, 228	100%

*CLEC data includes a small amount of data from Competitive Access Providers (CAPs).
Data Source: FCC Number Resource Utilization Forecast, December 31, 2000.

Staff noted the difference between the ILECs' 89 percent of assigned numbers and their 94.0 to 96.4 percent of California's local telephone lines, as well as the corresponding difference between the CLECs' 3.6 to 6.0 percent of local lines versus their 11 percent of assigned numbers. These differences can be explained in part by the nature of the distribution of copper telephone lines. In the case of a single residence, one telephone line (the copper cable running into the home) often equates to a single telephone number, i.e. a house will have a single telephone number. However, for a business location, one line may have several, if not many, numbers assigned to it. Therefore, a carrier may possess more telephone numbers than it does actual lines; there is not necessarily a one-to-one relationship between lines and telephone numbers. In fact, there are only 25 million lines as compared to 40 million assigned phone numbers in California. CLECs' 3.6 to 6.0 percent of California's local lines can thus result in 11 percent in assigned numbers if they serve many businesses or locations where a single line equates to many numbers. Another reason for the difference may be the nature of resale, whereby CLECs acquire telephone numbers from ILECs.[21] The CLECs, as the carriers in charge of billing the customers, report the numbers as their own. Thus, while ILECs may control the local lines, their actual count of assigned numbers has fallen due to the transfer of them to the CLECs via resale.

Staff also reviewed numbering data for regional distinctions. The service territories of the large, mid-sized, and rural ILECs in California designate regions. As noted earlier in this report, the two largest ILECs in California are Pacific and Verizon. The service territories of the large ILECs contain over 96 percent of the assigned wireline numbers. The service territories of the mid-sized ILECs contain 3 percent of the assigned wireline numbers, while the rural areas contain less than 1 percent or just 94,773 assigned numbers.

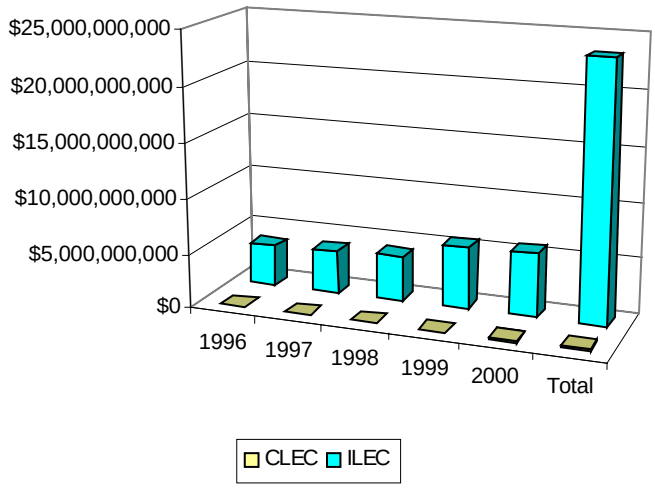
[20] Similar to the analysis of local telephone lines, there is not a one-for-one correlation between telephone numbers and the numbers of customers since a household or business can have more than one customer utilizing a given telephone number or vice versa.
[21] See discussion of Local Number Portability in Chapter 5.

The numbering data breakdown for territories of the large and mid-sized ILECs was similar to the statewide breakdown, with ILECs and CLECs holding 89 percent and 11 percent of assigned wireline numbers respectively in the large ILEC region and 90 percent and 10 percent of such numbers respectively in the mid-sized ILEC region. In the territories of the small ILECs, ILECs hold about 98 percent of the assigned wireline numbers while CLECs hold only 2 percent of the numbers.

iii. Local Revenue: Vast Majority Earned by ILECs

Overall Trend -- As a measure of competition, staff analyzed ILEC and CLEC local revenues between 1996 and 2000. The data shows that both industry sectors experienced local revenue growth each year. ILECs earned a total of $23.4 billion over the five-year period, with yearly revenues ranging from $3.8 billion in 1996 to $5.8 billion in 2000. CLECs earned a combined $190.1 million over the period, starting at $55,932 in 1996 and reaching $74.5 million in 2000. Overall, CLECs earned less than one percent of the total local revenues earned by ILECs between 1996 and 2000.

Figure 3.6
Annual Local Revenues in California*
1996-2000



* Source: CPUC Data Request responses.

Examination of the percentage of local revenues held by each carrier group on a year-by-year basis provides further evidence of the dominance of the ILECs in California's local market. As shown in Table 3.7 below, ILECs had earned nearly 100 percent of the state's total local revenues in 1996 and its share of those revenues was close to 99 percent for every

year between 1997 and 2000. By contrast, CLECs earned less than .5 percent of the total local revenues in 1996 and 1997. For each year from 1998 to 2000, the CLEC share of total local revenues hovered around the 1 percent mark.

Table 3.7: ILEC and CLEC Percent Share of California Local Revenue

Year	ILEC %	CLEC %	Total Local Revenue $
1996	99.999%	0.001%	$3,795,548,300
1997	99.594%	0.406%	$3,967,898,908
1998	98.938%	1.062%	$4,176,840,619
1999	99.039%	0.961%	$5,724,411,533
2000	98.732%	1.268%	$5,880,376,404
		Five Year Sum	*$23,545,075,764*

Source: CPUC Data Request responses.

Residential and Business Revenues Comparison – While CLEC local revenues are still small when compared with ILEC local revenues, the CPUC revenue data none the less suggests more consistent gains for CLECs into the business versus residential market. The CLEC share of local business revenue has grown every year in the reporting period. Namely, they have grown from .001 percent of the state's local business revenues in 1996 to over 1.8 percent of those revenues in 2000 (See Table 3.8 below).

Table 3.8: CLEC Share of Local Business Customer Revenue

Year	Total Local Business Revenue $	CLEC Local Business Revenue $	CLEC %
1996	$1,837,534,633	$22,178	0.001%
1997	$1,917,833,051	$7,859,786	0.410%
1998	$1,943,407,787	$19,022,214	0.979%
1999	$2,581,687,565	$38,220,149	1.480%
2000	$2,601,907,074	$47,056,659	1.809%
Five Year Sum	*$10,882,370,110*	*$112,180,986*	- - - - - -

Source: CPUC Data Request responses.

By comparison, the CLEC share of local residential revenues in the state has not shown consistent gains. As demonstrated on Table 3.9, CLEC share of local residential revenues grew from .002 percent to just over 1 percent in 1998. However, CLEC share of that revenue fell to just over .5 percent the following year and only reached just over .8 percent of the state's total local revenue from residential customers by 2000.

Table 3.9: CLEC Share of Local Residential Customer Revenue			
Year	**Total Local Residential Revenue $**	**CLEC Local Residential Revenue $**	**CLEC %**
1996	$1,958,013,667	$33,754	0.002%
1997	$2,050,065,857	$8,263,007	0.403%
1998	$2,233,432,832	$25,321,658	1.134%
1999	$3,142,723,968	$16,818,544	0.535%
2000	$3,278,469,330	$27,492,309	0.839%
Five Year Sum	*$12,662,705,654*	*$77,929,271*	- - - - - -

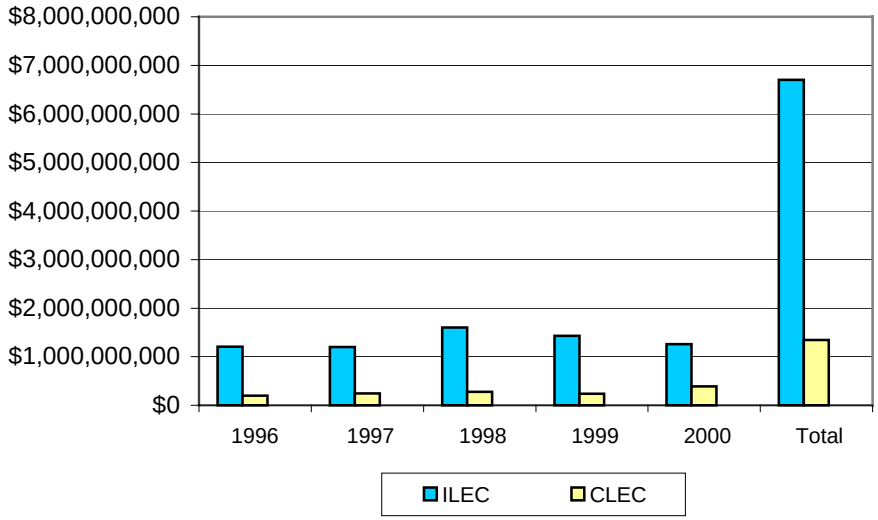
* Source: CPUC Data Request responses.

C. Local Toll Market: Competitors Fare Better Than in the Local Market But ILECs Still Dominant

i. Revenue: CLEC/IXC Earnings Significantly Less Than ILECs But Growing

As shown in figure 3.10, ILECs have earned significantly more than CLECs/IXCs in the local toll market. Both CLECs and IXCs compete against ILECs in the local toll market. The data for CLECs and IXCs could not be separated because many carriers are registered as both CLECs and IXCs. Between 1996 and 2000, ILECs earned $6.7 billion, while CLECs/IXCs earned $1.4 billion from toll revenues. In 1996, CLECs/IXCs s earned 17 percent ($202 million) of the local toll revenues that ILECs were making ($1.2 billion). In 2000 alone, CLECs/IXCs were making 31 percent ($390 million) of the revenues that ILECs were making ($1.26 billion). In addition, CLECs/IXCs outpaced the incumbents in the rate of revenue growth from 1996 to 2000 (CLECs/IXCs 93 percent to ILECs 4 percent growth). Nevertheless, in 2000, ILECs retained 76 percent of total local toll revenues. Thus, while surveyed ILECs collect the majority of toll revenues, CLEC/IXC local toll revenues grew by a significant amount. CLEC/IXC progress in the local toll market is noteworthy when compared to competitors in the local market who earned just 1 percent of local revenues.

Figure 3.10
Annual Toll Revenues in California
1996-2000



Source: CPUC Data Request responses.

The CPUC's revenue data also suggest a slower CLEC/IXC entry into the residential local toll segment as compared to their entry into the business local toll segment. In 2000, CLECs/IXCs earned 30 percent of the total local toll revenues generated from business customers as compared to close to 19 percent of the total local toll revenues from residential customers.

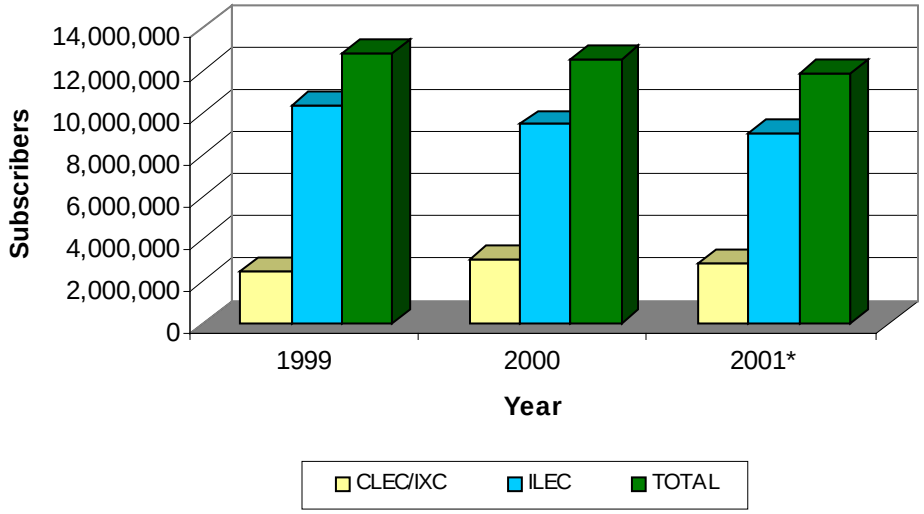
ii. Residential Customer Share: ILECs Maintain Over 75 Percent Of Market; CLEC/IXC Share Growing

From the CPUC data, staff also observed that ILECs have the majority of residential local toll subscribers in California, but the CLEC/IXC share is growing[22]. The number of residential local toll subscribers fell slightly from about 12.9 million subscribers to 12.5 million subscribers between the end of 1999 and the end of 2000 (See Appendix A)[23]. The CLEC/IXC share of residential local toll subscribership in the state, however, grew from nearly 2.5 million to more than 3 million customers during that time, an increase from 19.3 percent to 24.3 percent of all the residential local toll subscribers statewide. In the same period, the ILEC share of those residential toll subscribers fell slightly from more than 80 percent to nearly 76 percent. Although the mid-year 2001 residential local toll

[22] CLEC and IXC residential local toll subscriber data cannot be separated.
[23] The CPUC asked carriers to report the total number of residential, local toll customers they had between 1996 and June 2001. The total residential, local toll customers may include both presubscribed and non-presubscribed customers.

subscribership level for the state (11.9 million subscribers) was lower than in 2000, the ILECs and CLEC/IXC shares remained constant at 76 percent and 24 percent, respectively.

Figure 3.11
ILEC and CLEC/IXC Residential Toll Subscribers in California, 1999- 2001*



Source: CPUC Data Request
* Data Through June 2001 only

D. Long Distance Market: Mixed Signals

Staff evaluated the long distance market utilizing several different indicators. First, staff examined long distance minutes of use, which can provide useful information on competition since it measures how much subscribers are utilizing these services. Staff also evaluated long distance revenues and subscribership. Overall, the data suggest disparate trends.

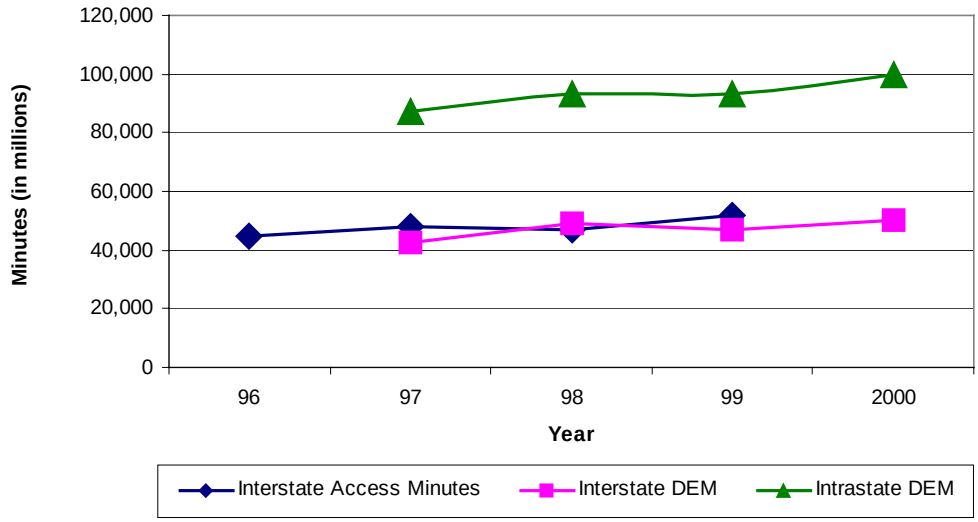
i. Long Distance Calling Volume Grows Gradually

By examining FCC data, staff identified several methods of measuring long distance minutes of use. These methods include: interstate access minutes[24], interstate dial equipment minutes (DEM)[25], and intrastate DEM. Regardless of the method, long distance minutes of use data indicate a market with gradual growth (see Figure 3.12 below). California interstate access

[24] Access minutes are those minutes transmitted by long distance carriers that also use the distribution networks of local telephone companies.

minutes over the period of 1996 to 1999 grew from 44.6 billion to 51.8 billion, with a slight decline in 1998. Over the period of 1997 to 2000, interstate DEM for California grew from 42.7 billion to 50.2 billion. Interstate DEM also indicate a decline one year, but this time in 1999. It is not clear why the changes in access minutes are not consistent with reported changes in dial equipment minutes.[26] A third measure, intrastate DEM[27], show yet a slightly different pattern. California intrastate DEM increased from 87.1 billion to 99.7 billion over the period of 1997 to 2000, with growth flat between 1998 and 1999.

Figure 3.12
California Long Distance Minutes



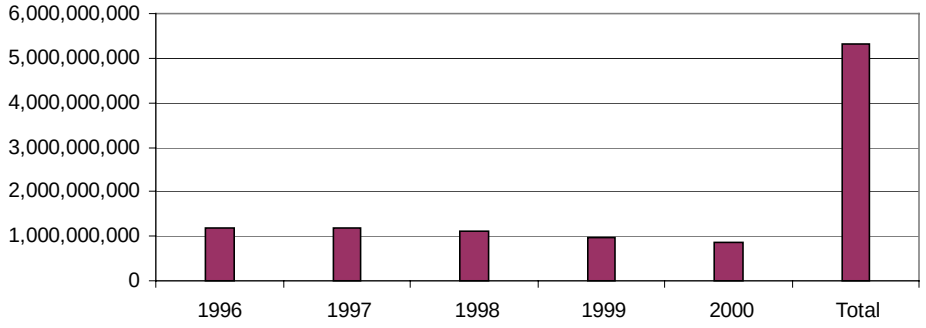
Source: *Universal Service Monitoring Report*, October 2001, Common Carrier Bureau, Federal Communications Commission, Section 8

ii. Industry Revenues Declining

By contrast, long distance revenue data shows a declining trend. IXCs earned a combined total of $5.3 billion in long distance revenues over the five-year period. 1997 was the best year for long distance revenues with earnings of approximately $1.2 billion. By the end of 2000, total revenues reported to the FCC declined to $871 million.

[25] Dial equipment minutes (DEM) are measured as calls enter and leave telephone switches. Periodic studies of dial equipment minutes are used to estimate the proportion of calling that is interstate and to allocate costs between interstate and intrastate services.
[26] Telephone industry traffic experts often argue that dial equipment minutes represent the best available information on the proportions of different types of calls, while access minutes are the most accurate available data on the volume of interstate calling. For additional discussion on the differences between the two measures, see *Trends in Telephone Service,* Industry Analysis Division, Common Carrier Division, December 2000, Section 11.
[27] Intrastate toll DEM are not separated by intraLATA and interLATA categories to provide unique data on the intraLATA and interLATA toll markets in California, as is done in this report. Although the data includes some minutes that may more appropriately fit with our local toll analysis, the data is reported here nevertheless to give the most complete picture possible of long distance minutes of use.

Figure 3.13
Annual Long Distance Revenues for California IXCs
1996-2000*



Source: CPUC Data Request

Several long distance carriers confirmed the downward trend in California long distance revenues. The carriers cited wireless, email and Internet substitution, increased competition, reduced access costs, and ILEC expanded calling areas as reasons for the decline.

iii. Residential Long Distance Suscribership: Downturn or Shift?

Table 3.14 below details the number of residential long distance subscribers reported by the IXCs[28] sampled by the CPUC. The data indicates that long distance subscribership in California fell by more than 13 percent for reporting carriers between 1996 and 2000[29]. It declined further by mid-year 2001 to just over 8.8 million subscribers in the state.

[28] All five of the CLECS that responded to the CPUC's data request on the status of competition indicated that they also act as IXCs in the long distance market in the state. No IXCs that were also ILEC affiliates were sampled.
[29] The CPUC asked carriers to report the total number of residential, long distance customers they had between 1996 and June 2001. The total residential, long distance customers may include both presubscribed and non-presubscribed customers.

Table 3.14 Residential Long Distance Subscribers Sampled Carriers in California 1996-2001*	
Year	**Residential Subscribers**
1996	10,677,018
1997	10,697,482
1998	10,860,939
1999	9,932,051
2000	9,337,509
2001*	8,832,917

* Data through June 30, 2001.
Source: CPUC Data Request responses.

However, it is unclear what the decline in residential subscribership data represents. First, the data could simply represent underreporting by sampled carriers. Despite staff's repeated attempts to collect data, the carriers did not completely respond to the data request. Second, the data could represent actual decline in subscribership. The same long distance carriers who confirmed the downward trend in long distance revenues (see above) also noted decreases in long distance subscribership. Third, the decline in subscribership could simply mean that California's long distance market is experiencing a shifting of customers between various competitors. Since the CPUC data request only included a subset of long distance carriers operating in the state, it may be capturing decreases in subscribership for some carriers, but not increases in subscribership for other carriers.

Staff evaluated residential long distance market shares based on FCC data on lines, revenues and direct dial minutes. The data divides long distance market shares by AT&T, Worldcom, Sprint and a category for "other" long distance carriers. Table 3.15 shows residential market share by long distance direct dial minutes from 1995 to 2000.

Table 3.15 Residential Market Share of Direct Dial Minutes in California 1995 –2000[30]				
	AT&T	***WorldCom***	***Sprint***	***Other Carriers***
1995	70.9%	17.3%	7.6%	4.1%
1996	68.3%	15.4%	7.5%	8.9%
1997	59.3%	17.1%	7.1%	16.4%
1998	Data not available	Data not available	Data not available	Data not available
1999	47.5%	22.3%	7.2%	23.0%
2000	42.6%	21.4%	6.7%	29.4%

[30] Data for 1995-1997: *Long Distance Market Share 4th Quarter 1998*, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission (FCC); Data for 1999: *Statistics of the Long Distance Telecommunications Industry,* January 2001, Industry Analysis Division, Common Carrier Bureau, FCC; Data for 2000: *Trends in Telephone Service*, released August 2001, Industry Analysis Division, Common Carrier Bureau, FCC.

Table 3.16 illustrates the residential market share by toll revenue from 1995 to 1999.

Table 3.16
Residential Toll Revenue for CA
1995 –1999[31]

	AT&T	*WorldCom*	*Sprint*	*Other Carriers*
1995	70.4%	16.2%	6.9%	6.5%
1996	68.4%	15.3%	7.1%	9.2%
1997	58.7%	17.3%	7.2%	16.8%
1998	54.7%	21.5%	7.6%	16.3%
1999	51.2%	25.8%	7.0%	16.0%

Table 3.17 shows residential market share by access lines from 1995 to 1999.

Table 3.17
Residential Access Lines for CA: 1995 –1999[32]

	AT&T	*WorldCom*	*Sprint*	*Other Carriers*
Access Lines				
1995	75.9%	15.3%	4.8%	4.0%
1996	75.6%	12.8%	6.3%	5.3%
1997	66.5%	15.5%	7.0%	11.0%
1998	Data not available	Data not available	Data not available	Data not available
1999	61.3%	18.5%	5.4%	14.7%

AT&T's share of the residential long distance market in the U.S., by all three measures, dropped sharply from 1995 to 1999/2000. Most of the growth occurred among smaller competitors and WorldCom. Despite the drop in market share, AT&T is still the dominant long distance carrier by the measures of toll revenues and access lines. Direct dial minutes is the only measure by which AT&T held less than 50 percent of the market share by 2000. The data also shows gains by carriers other than AT&T, Sprint and Worldcom.

E. Cross Market Revenue Comparison: ILECs Dominant

Retail Revenues in California – Examining aggregate revenue data across local, local toll and long distance markets corroborates the dominance of ILECs. ILECs, CLECs, and IXCs report their yearly surcharge data (or "retail revenues") to the CPUC.[33] Data gathered spans the years 1997 through 2001. As illustrated in Table 3.18, California ILECs earned $35.6

[31] Data for 1995-1997: *Long Distance Market Share 4th Quarter 1998*, Industry Analysis Division, Common Carrier Bureau, FCC; Data for 1998: *Trends in Telephone Service 2000 1st Report*, released March 2001, Industry Analysis Division, Common Carrier Bureau, FCC; Data for 1999: *Statistics of the Long Distance Telecommunications Industry,* January 2001, Industry Analysis Division, Common Carrier Bureau, FCC
[32] Data for 1995-1997: *Long Distance Market Share 4th Quarter 1998*, Industry Analysis Division, Common Carrier Bureau, FCC; Data for 1999: *Statistics of the Long Distance Telecommunications Industry,* January 2001, Industry Analysis Division, Common Carrier Bureau, FCC

billion over the five-year period, collecting an average of 46 percent of retail revenues. CLECs and IXCs combined earned less than half of what ILECs earned ($16.6 billion) from 1997 through 2001, and an average of 21 percent of total retail revenues. CLECs/IXCs earned the most in 2000, approximately $4 billion.

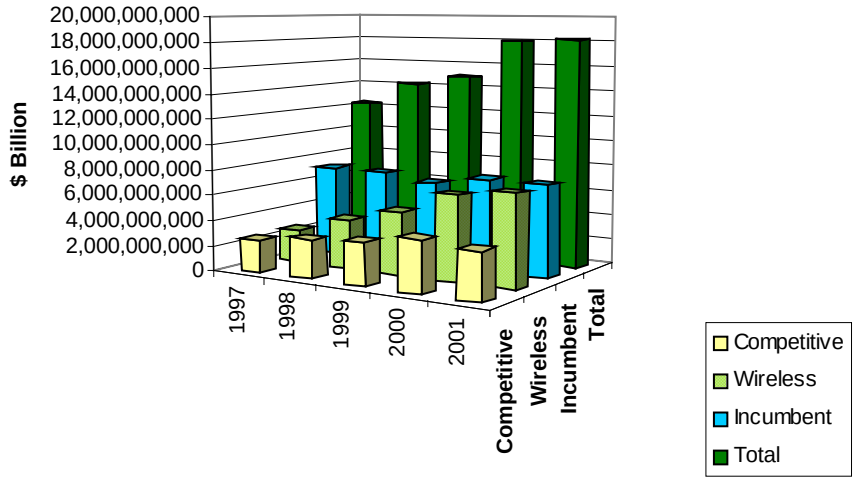
Table 3.18
California Intrastate Retail Revenues
Fiscal Year 1998-2001[34]

Year	CLEC & IXC[35]	Wireless	ILEC	Total
1997	$2,520,905,277	$2,575,524,672	$7,221,722,673	$12,318,152,622
1998	$3,059,269,916	$3,894,864,478	$7,198,329,141	$14,152,463,535
1999	$3,316,414,458	$4,998,957,508	$6,634,936,725	$14,950,308,691
2000	$4,050,307,194	$6,661,032,550	$7,290,518,707	$18,001,858,451
2001[36]	$3,690,367,691	$7,210,674,212	$7,248,143,380	$18,149,185,283
Total	$16,637,264,536	$25,341,053,420	$35,593,650,626	$77,571,968,582
1997	20%	21%	59%	100%
1998	22%	28%	51%	100%
1999	22%	33%	44%	100%
2000	22%	37%	40%	100%
2001	20%	40%	40%	100%
Average	21%	33%	46%	100%

It is noteworthy that wireless carriers collected an average of 33 percent of retail revenues, significantly more than CLECs/IXCs did between 1997 and 2001. It is also significant that ILECs and wireless carriers each earned approximately $7.2 billion in 2001. Competition in the wireless sector, including revenue comparisons with the wireline sector, is discussed in greater detail in Chapter 4, Wireless and Advanced Services.

[33] Reporting systems do not enable CLEC and IXC revenues to be separated.
[34] Source: Combined California PUC Telephone Surcharge Transmittal forms as of October 23, 2001.
[35] Includes local toll and long distance revenues.
[36] Year 2001 retail revenue data is based on first eight months of 2001 data annualized.

Figure 3.19
California Telecommunications Retail Revenues *



Source: Combined California PUC Telephone Surcharge Transmittal forms (as of 5/17/02)
* Retail revenues represent the amount billed by carriers to retail customers, subject to CPUC surcharges. Retail revenues do not include the amount earned from wholesale customers.

Total Operating Revenues in California – Responses to the CPUC data request provided information about operating revenues earned by ILECs and CLECs/IXCs. Total operating revenues are the sum of local, local toll, and long distance revenues. Total operating revenues are a measure of industry-wide competition because they aggregate individual revenue streams, thus enabling overall earning differences to be examined. Between 1996 and 2000, $41.7 billion in total operating revenues were reported by ILECs while $11.4 billion were reported by CLECs/IXCs. Both ILECs and CLECs/IXCs earned their greatest total operating revenues in 2000, $10.7 billion and $2.8 billion respectively. They each earned the least in 1996, $6.5 billion and $1.7 billion.

During this period, ILEC total operating revenues grew by 66 percent and CLEC/IXC revenues grew by 61 percent. Thus, ILECs are still dominant in terms of revenue share but CLEC/IXC operating revenue growth was almost equal to ILECs.

Figure 3.20
Total Operating Revenues in California, 1996-2000

Source: CPUC Data Request